

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/001994

International filing date (day/month/year)
20.05.2005

Priority date (day/month/year)
21.05.2004

International Patent Classification (IPC) or both national classification and IPC
H04L12/26, H04L29/06

Applicant
XYRATEX TECHNOLOGY LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

10/576876

International application No.
PCT/GB2005/001994

IAP20 Rec'd PCT/PTO 21 APR 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/001994

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-23
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-23
Industrial applicability (IA)	Yes: Claims	1-23
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2005/001994

IAF20 Received 21 APR 2006

Re Item V.

- 1 Reference is made to the following document:
D1 : COPPENS J ET AL: "A Scalable Monitoring Platform for the Internet (SCAMPI). Deliverable 2.3: Enhanced SCAMPI Implementation and Applications", April 2004.
D2 : WO 03/094418 A, 13 November 2003
- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

Document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document) a method of processing data, this method comprising:

- receiving data from a network link;
- replicating said data to produce at least two editions of the received data (page 49, lines 24-31);
- writing said editions of the received data to an area of memory in a host (figure 4.5 "sockets rings") that is directly accessible by a host application (figure 4.5: applications A -Z use "mmap()" for accessing the editions of the received data).

The subject-matter of claim 1 therefore differs from this known method in that the replication of data is performed onboard a network analyser card.

This feature provides an alternative solution to the problem of efficient monitoring of network traffic, and has the advantage of not requiring host processing capacity for the replication of the packets (as stated in the description, page 5, last paragraph).

Even though in D1 the duplication of packets is performed by the network adapter driver (see page 49 or page 76), D1 already suggests the implementation of kernel functionality (e.g. driver) in the network adapted card to off-load the host processor (see D1 page 9, lines 4-10 and page 52, section 4.6, first paragraph). It would

therefore be obvious to the person skilled in the art, to apply this feature (i.e. replicating the data onboard the network analysis card) with the corresponding effect to a method according D1 thus arriving at a method of processing data according to claim 1.

- 3 Furthermore, D1 discloses a network analyser card for connection to a host comprising a description adder configured and arranged to add a descriptor to substantially each of the data frames of each of the at least two replica editions of the received data frames, the descriptor including data about the data frame to which it is attached for use in processing the data frame (see sections 7.2.4 and 7.2.8). Therefore, taking into account the point 2 above, the subject-matter of claim 14 does not involve an inventive step in the sense of Article 33(3) PCT.
- 4 The subject-matter of claim 20 differs from that of claim 1 in that the host comprises at least two processors for processing the editions of received data. Even though this feature is not explicitly disclosed in D1, the use of multiprocessor hosts is a matter of customary practice in the field of traffic monitoring (see e.g. D2, page 2, line 23 - page 3, line 9). Therefore, the subject-matter of claim 20 does not involve an inventive step in the sense of Article 33(3) PCT.
- 5 Furthermore, the subject-matter of claim 23 does not involve an inventive step in the sense of Article 33(3) PCT.
Document D1 already anticipates an intrusion detection system comprising a host according to claim 20 (see point 4 above) wherein the processors are arranged to execute rules of an intrusion detection system on data packets received by the host (see D1, page 94, line 19 - page 95, line 18).
- 6 Dependent claims 2-13, 15-19, 21, 22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT).